

Serial No. 10/634,896

Docket No. P-0572

Amendment dated December 22, 2005

Reply to Office Action of August 22, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-47. Canceled.

48. (New) A method of transmitting a cell ID code in a mobile communication system, in which a primary cell is recognized by receiving a primary cell ID code from a terminal, comprising:

receiving a plurality of temporary cell ID codes from a control center;

measuring a power of a Common Pilot Channel (CPICH) of a cell;

selecting a temporary cell ID code with a strongest power of the CPICH of the cell;

checking whether the selected temporary cell ID code has a length of 16-bits;

checking whether feedback information (FBI) bits are 2 bits, if the detected temporary cell ID code has the length of 16-bits;

puncturing two '0' bits in the selected temporary cell ID code to generate a primary cell ID code having one of the following bit configurations with the punctured bits indicated in parentheses:

A: (0)000 (0)000

0 000 0 000

B: (0)000 (0)000

1 111 1 111

C: (0)101 (0)101

0 101 0 101

D: (0)101 (0)101

1 010 1 010

E: (0)011 (0)011

0 011 0 011

F: (0)011 (0)011

1 100 1 100

G: (0)110 (0)110

0 110 0 110

H: (0)110 (0)110

1 001 1 001

; and

transmitting the selected 16-bit temporary cell ID code through a 2-bit FBI field of the first 8 slots of one radio frame and transmitting the 14-bit punctured primary cell ID codes through a 2-bit FBI field of the last 7 slots of the radio frame.

49. (New) The method of claim 48, wherein the control center is a radio network controller (RNC) and the plurality of primary cell ID codes are transmitted to active cells via a portion of an uplink FBI field.

50. (New) The method of claim 49, wherein the active cells compare the primary cell ID code with the temporary cell ID code assigned from the RNC; and wherein each active cell identifies itself as a primary cell and transmits a Dedicated Physical Data Channel (DPDCH) and a Dedicated Physical Control Channel (DPCCH) to the terminal if the primary cell ID code and the temporary cell ID code are identical upon comparison.

51. (New) The method of claim 49, wherein the active cells compare the primary cell ID code with the temporary cell ID code assigned from the RNC; and wherein each active cell identifies itself as a non-primary cell and transmits a Dedicated Physical Control Channel (DPCCH) to the terminal if the primary cell ID code and the temporary cell ID code are not identical upon comparison.

52. (New) The method of claim 49, wherein the primary cell ID code to be transmitted to the cells is segmented into a number of portions and wherein the portions are distributed in the uplink FBI S-field.

53. (New) The method of claim 49, wherein the cell collects the transmitted portions of the primary cell ID code and detects a transmitted cell ID.

54. (New) A communication terminal comprising:

- a transceiver to receive and transmit data; and
- a processor cooperating with the transceiver to perform the steps of,
 - receiving a plurality of temporary cell ID codes from a control center;
 - measuring a power of a Common Pilot Channel (CPICH) of a cell;
 - selecting a temporary cell ID code with a strongest power for the CPICH of the cell;
 - if the temporary cell ID code is detected to be 16 bits, puncturing two '0' bits in the selected temporary cell ID code to generate a primary cell ID code having one of the following bit configurations with the punctured bits indicated in parentheses:

A: (0)000 (0)000

0 000 0 000

B: (0)000 (0)000

1 111 1 111

C: (0)101 (0)101

0 101 0 101

D: (0)101 (0)101

1 010 1 010

E: (0)011 (0)011

0 011 0 011

F: (0)011 (0)011

1 100 1 100

G: (0)110 (0)110

0 110 0 110

H: (0)110 (0)110

1 001 1 001

; and

transmitting the selected 16-bit temporary cell ID code through a 2-bit feedback information (FBI) field of the first 8 slots of one radio frame and transmitting the 14-bit punctured primary cell ID codes through a 2-bit FBI field of the last 7 slots of the radio frame.

55. (New) A method of transmitting a cell ID code in a mobile communication system, in which a primary cell is recognized by receiving a primary cell ID code from a terminal, the method comprising:

receiving a plurality of 16-bit temporary cell ID codes from a control center;

measuring a power of a Common Pilot Channel (CPICH) for active cells that transmit for site selection diversity transmission (SSDT);

selecting a 16-bit temporary cell ID code with the strongest power of the CPICH according to the measuring;

puncturing two '0' bits of the selected 16-bit temporary cell ID code to generate a 14-bit primary cell ID code having one of the following bit configurations with the punctured bits indicated in parentheses:

A: (0)000 0000 (0)000 0000

B: (0)000 1111 (0)000 1111

C: (0)101 0101 (0)101 0101

D: (0)101 1010 (0)101 1010

E: (0)011 0011 (0)011 0011

F: (0)011 1100 (0)011 1100

G: (0)110 0110 (0)110 0110

H: (0)110 1001 (0)110 1001

transmitting the selected 16-bit temporary cell ID code via a 2-bit feedback information (FBI) field of the first 8 slots of one radio frame; and

transmitting the generated 14-bit primary cell ID code via a 2-bit FBI field of the last 7 slots of the one radio frame.

56. (New) A method of transmitting a cell ID code in a mobile communication system, in which a primary cell is recognized by receiving a primary cell ID code from a terminal, comprising:

receiving a plurality of temporary cell ID codes from a control center, wherein each temporary cell ID code has a length of 16 bits and one of the following configurations:

A: 0000 0000 0000 0000

B: 0000 1111 0000 1111

C: 0101 0101 0101 0101

D: 0101 1010 0101 1010

E: 0011 0011 0011 0011

F: 0011 1100 0011 1100

G: 0110 0110 0110 0110

H: 0110 1001 0110 1001;

measuring a power of a Common Pilot Channel (CPICH) of a cell;

selecting a temporary cell ID code with a strongest power of the CPICH of the cell;

checking whether the selected temporary cell ID code has a length of 16 bits;

if the selected temporary cell ID code has 16 bits, checking whether a feedback information (FBI) field has a length of 2 bits;

transmitting the selected 16-bit temporary cell ID code via a 2-bit FBI field of the first 8 slots of one radio frame;

puncturing two '0' bits of the selected temporary cell ID code to generate a primary cell ID code having one of the following configurations with the punctured bits indicated in parentheses:

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A: (0)000 0000 (0)000 0000

B: (0)000 1111 (0)000 1111

C: (0)101 0101 (0)101 0101

D: (0)101 1010 (0)101 1010

E: (0)011 0011 (0)011 0011

F: (0)011 1100 (0)011 1100

G: (0)110 0110 (0)110 0110

H: (0)110 1001 (0)110 1001

; and

transmitting the generated primary cell ID code via a 2-bit FBI field of the last 7 slots of the one radio frame.